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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,133	06/26/2003	Mansoor Sarfarazi	UCT-0046-P2	2233
23413 7590 03/12/2007 CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			EXAMINER SITTON, JEHANNE SOUAYA	
			ART UNIT	PAPER NUMBER
			1634	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/12/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/609,133	Applicant(s) SARFARAZI ET AL.	
	Examiner Jehanne S. Sitton	Art Unit 1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-8 and 11-45 is/are pending in the application.
- 4a) Of the above claim(s) 5-7, 11-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,8,44 and 45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11-06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Currently, claims 1, 4-8, 11-43, and newly added claims 44-45 are pending in the instant application. Claims 5-7 and 11-43 are withdrawn from consideration as being drawn to non elected inventions. Claims 1, 4, 8 and 44-45 are currently under examination. All the amendments and arguments have been thoroughly reviewed but are deemed insufficient to place this application in condition for allowance. The following rejections are either newly applied, as necessitated by amendment, or are reiterated. They constitute the complete set being presently applied to the instant Application. Response to Applicant's arguments follow. This action is FINAL.

2. The objection to the specification under 35 U.S.C. 132(a) for new matter is moot in view of the amendments to the specification.

3. The declaration under 37 CFR 1.132 filed 12/13/2006 is sufficient to overcome the rejection of claims 1-4 and 8-10 based upon rejections under 35 USC 102(a) and 35 USC 103(a), respectively, over Rezaie.

4. The rejection of claims 1-2, 4, and 8-9 under 35 USC 102(a) as being anticipated by Sornasse is moot in view of the amendments to the claims.

5. The rejections made under 35 USC 112/first paragraph, set forth at pages 6-17 of the previous office action are moot in view of the amendments to the claims.

Indefinite

6. Claims 1, 4, 8 and 44-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 8, 44, and 45 recite “corresponding to a G to A change at position 458”, however it is not clear what position “458” is in reference to. For example, it appears that it may be in reference to the nucleotide position in SEQ ID NO: 1, which is currently under examination as an elected species, however, the claims also contain additional nucleotide sequences (different species) but the nucleotide at position 458 of SEQ ID NO: 1 does not appear to be the same nucleotide at position 458 of SEQ ID NO: 3.

Claims 8 and 45 recite “solid support used detect or sequence...”, which is grammatically incorrect. It is not clear if the claim intends to recite “used, or detect or sequence...” or “used to detect or sequence...”.

Claim Rejections - 35 USC § 102

7. Claims 1, 4, 8, and 44-45 are rejected under 35 U.S.C. 102(a) and 102(e) as being anticipated by Fodor (US PreGrant Publication 2001/0053519).

Fodor teaches an array of every possible 10 mer nucleic acid molecule. The claims encompass a genus of 10 mer nucleic acid molecules (claims 1-4) as well as an array comprising this genus of nucleic acid molecules, which is anticipated by the teachings of Fodor. With regard to claims 44 and 45, the specification does not set forth the metes and bounds of the term

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“about”. Accordingly, the term has been given it’s broadest reasonable interpretation to encompass 10 nucleotides.

Response to Arguments

8. The response traverses the rejection. The response asserts that that Fodor merely teaches “the immensely broad genus of all possible 10 mer nucleic acids” and does not teach any specific 10 mer. The response further asserts that Fodor does not teach the limitations of the claims and does not teach a mutation in the optineuim gene as required by independent claims 1 and 8. This argument has been thoroughly reviewed but was not found persuasive. First, the claims, which are directed to “about 10” or “about 15” contiguous nucleotides, are not limited to a specific sequence. Regardless, however, the array taught and claimed by Fodor contains every possible 10 mer oligonucleotide. These oligonucleotides have been synthesized and therefore anticipate claims that read on a 10 mer oligonucleotide. Additionally, the claims include the transitional phrase “comprising” and are thus not limited to the probes set forth in the claim. The argument that Fodor does not teach a specific mutation is not found persuasive as this sets forth no added limitation to the claimed invention to distinguish from the nucleic acids of Fodor. The fact that Fodor does not specifically appreciate that many of the 10 mers include a nucleotide which is polymorphic does not distinguish the instantly claimed nucleic acids from those of Fodor. The arguments that claims 44-45 “include” 15-30 “amino acids” has been thoroughly reviewed but was not found persuasive. First, the claims are not directed to “amino acids” but to nucleotides. Secondly, the claims recite “about”, which is not limited to a minimum length of 15 nucleotides. In the absence of a specific definition as to the limits of “about”, the term has been given it’s

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broadest reasonable interpretation to encompass 10. It is additionally noted that although the intended use recitation of claims 8 and 45 is not given any patentably weight, arrays of oligomer probes are used in sequencing by hybridization methods, and thus this intended use is an inherent property of the array taught and claimed by Fodor.

9. Claims 1, 4, 8 and 44-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Brennan (US Patent 5,474,796).

Brennan (cols 9-10) teaches an array of every possible 10 mer nucleic acid molecule. The claims encompass a genus of 10 mer nucleic acid molecules (claims 1-4) as well as an array comprising this genus of nucleic acid molecules (claims 8-10), which is anticipated by the teachings of Brennan. With regard to claims 44 and 45, the specification does not set forth the metes and bounds of the term "about". Accordingly, the term has been given it's broadest reasonable interpretation to encompass 10 nucleotides.

Response to Arguments

10. The response traverses the rejection. The response asserts that that Brennan merely teaches "the immensely broad genus of all possible 10 mer nucleic acids" and does not teach any specific 10 mer. The response further asserts that Brennan does not teach the limitations of the claims and does not teach a mutation in the optineuirm gene as required by independent claims 1 and 8. This argument has been thoroughly reviewed but was not found persuasive. First, the claims, which are directed to "about 10" or "about 15" contiguous nucleotides, are not limited to a specific sequence. Regardless, however, Brennan teaches to construct every possible 10 mer oligonucleotide, and therefore anticipate claims that read on a 10 mer oligonucleotide.

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Additionally, the claims include the transitional phrase “comprising” and are thus not limited to the probes set forth in the claim. The argument that Brennan does not teach a specific mutation is not found persuasive as this sets forth no added limitation to the claimed invention to distinguish from the nucleic acids of Brennan. The fact that Brennan does not specifically appreciate that many of the 10 mers include a nucleotide which is polymorphic does not distinguish the instantly claimed nucleic acids from those of Brennan. Additionally, the claims broadly recite “a complement” which includes complements from within the recited sequence, that is smaller sequences which are complementary to the recited sequences. Brennan teaches an array of every possible trimer, which also anticipates the claims. The arguments that claims 44-45 “include” 15-30 “amino acids” has been thoroughly reviewed but was not found persuasive. First, the claims are not directed to “amino acids” but to nucleotides. Secondly, the claims recite “about”, which is not limited to a minimum length of 15 nucleotides. In the absence of a specific definition as to the limits of “about”, the term has been given it’s broadest reasonable interpretation to encompass 10. It is additionally noted that although the intended use recitation of claims 8 and 45 is not given any patentable weight, arrays of oligomer probes are used in sequencing by hybridization methods, and thus this intended use is an inherent property of the array taught by Brennan.

11. Claims 1, 4, and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Genbank Accession number BE013065 (July 2000).

Genbank Accession number BE013065 teaches a nucleic acid which comprises 17 contiguous base pairs of SEQ ID NO: 1 where the position corresponding to nucleotide 458 of

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SEQ ID NO: 1 is an A (nucleotides 138- 154 are identical to instant nucleotides 451-467 of SEQ ID NO: 1). The recitation of “wherein the change is indicative of the presence of an optineurin associated glaucoma” is considered an inherent property of the nucleotide.

Claim Rejections - 35 USC § 103

12. Claims 8, and newly added claims 45 is rejected as being unpatentable over Genbank Accession number BE013065 in view of Fodor or Brennan.

Genbank Accession number BE013065 teaches a nucleic acid which comprises 17 contiguous base pairs of SEQ ID NO: 1 where the position corresponding to nucleotide 458 of SEQ ID NO: 1 is an A (nucleotides 138- 154 are identical to instant nucleotides 451-467 of SEQ ID NO: 1). The recitation of “wherein the change is indicative of the presence of an optineurin associated glaucoma” is considered a property of the nucleotide. Genbank Accession number BE013065 does not teach an array of nucleic acids attaches to a solid support comprising a nucleic acid molecule comprising 10-50 or 15-30 nucleotides of SEQ ID NO: 1, however Fodor teaches methods of detecting nucleic acid targets using nucleic acid probes attached to a solid support of probes (abstract). Further, Brennan teaches methods of detecting nucleic acid targets using nucleic acid probes attached to a solid support of probes (col. 3). Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to attach the nucleic acid molecule taught by Genbank Accession number BE013065 to a solid support for the purpose of constructing a detection reagent that could be used to detect nucleic acid molecule targets comprising the sequence of the accession number. The ordinary artisan would have been motivated to attach the nucleic acid molecule taught by Genbank Accession

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number BE013065 to a solid support because each of Fodor and Brennan teach that arrays of probes can be used in a number of nucleic acid based applications including target detection and identification.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

14. No claims are allowed.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Jehanne Sitton whose telephone number is (571) 272-0752. The examiner can normally be reached Monday-Thursday from 8:00 AM to 5:00 PM and on alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla, can be reached on (571) 272-0735. The fax phone number for this Group is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

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For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.



Jehanne Sitton
Primary Examiner
Art Unit 1634

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